



Sustainable Design And Development

"Meeting the needs of the present without compromising the ability of future generations to meet their own needs."

"SDD Will Improve Army Installations."



**A Guide for
Army Garrison
Commanders**

*presented by the Office
of the Assistant Chief of
Staff for Installation
Management*

THE CONCEPT AND PRACTICE OF SUSTAINABLE DESIGN AND DEVELOPMENT



BALANCE WITH NATURE

Army Policy Is To Implement SDD At All Installations!

26 April 2000 ASA I&H Memorandum — SDD is an evolving way to look at how we meet human needs and also maintain a balance between quality of life, natural resources, development, social equity, ecology, economics, and commitment to future generations.

SUSTAINABLE TRIANGLE ECOLOGY-ECONOMY-SOCIAL EQUITY

What Is SDD?

Sustainable Design and Development is:

- A concept, a philosophy, a management principle, a rule to live by, a different holistic way to approach planning, design and construction;
- A systematic process and engineering practice with how to do it guidance, check lists, tools, and scoring systems;
- Infuse environmental and sustainable considerations into installation design and development process.
- In the content of Army installations SDD is the design, construction, operation and reuse/removal of the built environment in an environmentally and energy efficient manner;
- And a process for the systematic consideration of current and future impacts of an activity, product or decision on the environment, energy use, natural resources, the economy and quality of life.
- SDD means integrating the decision-making process across Army installations, basing every decision on the greatest long-term benefits – eliminating the concept of waste – thinking “cradle-to-cradle” – building on natural processes and energy cycles – recognizing the interrelationship of installation actions with the natural world.

Why SDD?

- Installations are where America's Army work and grow.
- Army installations and their facilities consume financial and natural resources.
- Improves sustainability and livability of Army installations.
- Better visibility and evaluation of long-range installation impacts of Army decisions.

Benefits Of SDD!

- Compliance with Greening the Government Executive Orders
- Cost savings – Reduced 1st costs and life-cycle costs
- Energy savings and emissions reductions
- Increased use of Renewable Energy
- Integrated Design Teams and involves customers
- Better design and mission performance of facility
- Enhances Quality of Life – Indoor Air Quality, Health and Safety
- Increased Productivity (Building Occupants)
- New technologies, products, designs and construction

How Do We Implement SDD?

Integrate Sustainable Design and Development concepts and practice into:

- Installation planning and development actions
- Infrastructure project life-cycle planning, programming, design, contract, construction, operation, maintenance, renovation and disposal process
- Do it to the fullest extent possible, balanced with funding constraints and customer requirements.

The Assistant Chief of Staff for Installation Management (ACSIM) is responsible for implementing the Army SDD policy and the United States Army Corps of Engineers (USACE) is providing the supporting technical guidance.

The ACSIM and USACE have taken specific actions to include SDD into installation master plans, infrastructure projects, guide specifications, A&E selection criteria, value engineering, and construction contract language.

These Actions Include:

- Guidance to include SDD in all project (“1391”) justification documents.
- Conducting SDD Training Course for Army Facility Engineers and Planners.
- SDD spotlighted as Key Issue at all Army Leadership Conferences.
- Showcasing Army MILCON Projects, to demonstrate Sustainable Design.
- Including SDD Army Installation Planning Policy Decisions and planning conferences, presentations and training.
- Maintaining a SDD information Hotlink on ACSIM and USACE Web-pages.
- Published ETL 1110-3-491 “Sustainable Design for Military Facilities”.
- Incorporating SDD in Value Engineering Program.
- Partnering with National Academy of Science's Sustainability Working Group and Green Building Council.
- And we are in the process of finalizing a Sustainable Project Rating System for Army-wide implementation.

Sustainable Project Rating Tool

USACE Labs in coordination with Green Building Council, developed Sustainable Project Rating Tool (SPiRiT).

SPiRiT is a process for considering and scoring sustainability of installation facility projects and rate against standards “Bronze, Silver, Gold, Platinum”.

ACSIM/USACE plan to field SPiRiT with a goal that Army designers achieve a minimum ‘Bronze’ rating for all projects.

Use the SPiRiT to:

- Optimize Site Potential
- Maximize Renewable Energy Consumption
- Use Environmentally Preferable Products/Materials
- Protect and Conserve Water
- Enhance Indoor Environmental Quality
- Optimize Operational and Maintenance Practices
- SPiRiT adds three categories: facility delivery process, current missions, and future missions; and is oriented to military facilities.

ECO LEASES

What Can I Do At My Installation?

- Include SDD principles in all installation projects and planning deliberations.
- Include SDD principles in your mission statements and strategic plans.
- Establish long-term improvement objectives, throughout all levels of your organization.
- Include SDD strategies and “green” clauses in procurements can result in lower first costs and life-cycle costs.
- Integrate economic evaluations that compare first costs plus operating costs.
- Establish SDD Integrated design Teams.
- Build Green durable facilities of long-term value.
- Use renewable energy sources, such as passive solar heating, cooling and thermal storage, and photovoltaics.
- Improve of indoor air quality and productivity of buildings.
- Use Green products and eliminate toxic-based materials.
- Showcase and demonstrate SDD facilities.
- Look for sustainable products, like low VOC paints and flooring.
- Maximize resource reuse, while maintaining financial stewardship.
- Reuse historic buildings and existing facilities.
- Create a healthy working environment for all facilities.
- Create flexible workplaces that respond to SDD work practices and culture.
- Create livable environments with sustainable transportation and where appropriate restore or showcase the natural environment.
- Use SDD Project Rating Tool to measure your installation's sustainability.
- Provide SDD training opportunities for your DPW personnel.



“In our every deliberation, we shall consider the impacts of our decisions upon the next seven generations.”

Law of the Iroquois Confederacy

“The earth belongs to each generation during its course — no generation can contract debts greater than may be paid during the course of its own existence.”

Thomas Jefferson

INTEGRATED DESIGN TEAMS

WHOLE BUILDING DESIGN

SUSTAINABLE INSTALLATIONS FOR FUTURE GENERATIONS

Think Sustainable...



Executive Order 13123, 3 June 99, — Federal leadership in Energy Management — DoD develop SDD principles.

" The Army has led the nation in building an environmentally friendly and energy efficient future. SDD ensures the Army will continue to have a leadership role in constructing and operating sustainable installations & facilities."

Office of the Assistant Secretary of the Army for Installations & Environment

" SDD is smart business. It protects Army resources and our environment now and for future generations. It's simply the right thing to do."

Major General Robert Van Antwerp, Assistant Chief of Staff for Installation Management

"I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful use, the generations that come after us."

Theodore Roosevelt

WHO TO CALL

Office of the Assistant Chief of Staff for Installation Management (OACSIM), Directorate of Facilities and Housing, Facilities Policy Division, HQDA formulates Army policy and guidance on the Army's commitment to use of Sustainable Design and Development principles. OACSIM develops goals and strategies for implementing SDD policies and related technical guidance.

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SDD WEB ADDRESS

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